UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450

NOTICE OF ALLOWANCE AND FEE(S) DUE

95567 7590 (9931/2011 EXAMINER
RatnerPrestia (JM) NGUYEN, TUMINH
P.O. Box 980

Valley Force DA 10482-0080 ART UNIT PAPER NUMBER

 Valley Forge, PA 19482-0980
 ART UNIT
 PAPER NUMBER

 3748
 DATE MAILED: 03/31/2011

 APPLICATION NO.
 FILING DATE
 FIRST NAMED INVENTOR
 ATTORNEY DOCKET NO.
 CONFIRMATION NO.

 10/527,634
 10/07/2005
 Martyn Vincent Twigg
 AA 1675 US
 2199

TITLE OF INVENTION: COMPRESSION IGNITION ENGINE AND EXHAUST SYSTEM THEREFOR

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/30/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 1SI. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

IL PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, davance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise is Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for

maintenance fee notification	ons.						
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TITLE OF INVENTION:	COMPRESSION IGN		KHAUST SYSTEM THER				
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE I	FEE TOTAL FEE(8) DUE	DATE DUE	
nonprovisional	NO	\$1510	\$300	\$0	\$1810	06/30/2011	
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NGUYEN, T	TU MINH	3748	060-295000	1			
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1. Change of correspondence address or indication of Tee Address' (37 CFR 1.363). Change of correspondence address for Change of Correspondence Address form PTO/SB/122) attached. Tee Address' indication (or Tee Address' Indication form PTO/SB/147; Rev 0.3-02 or more recent) attached. Use of a Customer Number is required. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON			(1) the names of up to 3 registered patent attorneys 1 cagento RR, alternatively, 2 (2) the name of a single firm thaving as a member a registered attorney or agents and the names of up to 1 instell, no name will be printed.				
	ss an assignee is ident in 37 CFR 3.11. Comp			atent. If an assignee assignment.		document has been filed for	
Please check the appropria	te assignee category or	categories (will not be pr	rinted on the patent): 🔲	Individual 🚨 Corp	oration or other private gr	oup entity 🚨 Government	
4a. The following fee(s) are submitted: I ssue Fee Publication Fee (No small entity discount permitted) Advance Order - # of Copies			th. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) A check is enclosed. Payment by redit card. Form PTO-2038 is attached. The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number (enclose an extra copy of this form).				
5. Change in Entity Statu	s (from status indicate	d above)	_				
a. Applicant claims					ENTITY status. See 37 C		
NOTE: The Issue Fee and interest as shown by the re	Publication Fee (if req cords of the United Sta	uired) will not be accepte ites Patent and Trademark	d from anyone other than to Office.	he applicant; a registe	ered attorney or agent; or t	he assignee or other party ir	
Authorized Signature _							
Typed or printed name			Registration No.				
This collection of informat an application. Confidentis submitting the completed this form and/or suggestio Box 1450, Alexandria, Vin Alexandria, Virginia 2231.	tion is required by 37 C ality is governed by 35 application form to the ns for reducing this bu rginia 22313-1450. DC 3-1450.	FR 1.311. The informatic U.S.C. 122 and 37 CFR USPTO. Time will vary rden, should be sent to the ONOT SEND FEES OR O	on is required to obtain or r 1.14. This collection is est depending upon the indiv the Chief Information Office COMPLETED FORMS TO	retain a benefit by the imated to take 12 mi idual case. Any com rr, U.S. Patent and Tr O THIS ADDRESS.	public which is to file (ar nutes to complete, includi ments on the amount of t ademark Office, U.S. Dep SEND TO: Commissioner	d by the USPTO to process ng gathering, preparing, and time you require to complete sartment of Commerce, P.O. for Patents, P.O. Box 1450	

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PTOL-85 (Rev. 02/11) Approved for use through 08/31/2013.

OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virgina 22313-1450

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.		
10/527,634	10/07/2005	Martyn Vincent Twigg	AA 1675 US	2199		
95567 75	90 03/31/2011		EXAMINER			
RatnerPrestia (JN	1)	NGUYEN, TU MINH				
P.O. Box 980						
Valley Forge, PA 1	19482-0980	ART UNIT	PAPER NUMBER			

3748 DATE MAILED: 03/31/2011

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- The information on this form will be treated confidentially to the extent allowed under the Freedom
 of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of
 records may be disclosed to the Department of Justice to determine whether disclosure of these
 records is required by the Freedom of Information Act.
- A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement neeotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
- A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Application No. Applicant(s) 10/527.634 TWIGG ET AL. Notice of Allowability Examiner Art Unit TILM NGLIYEN 3748 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTQL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFB 1.313 and MPEP 1308. 1. This communication is responsive to an Applicant's RCE filed on December 21, 2010. The allowed claim(s) is/are 49-75. 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). b) \(\subseteq \text{Some*} \) c) \(\subseteq \text{None} \) of the: 1. T Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. _____. 3. X Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)). * Certified copies not received: _____. Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. CORRECTED DRAWINGS (as "replacement sheets") must be submitted. (a) Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached 1) hereto or 2) to Paper No./Mail Date (b) I including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). 6. I DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL. Attachment(s) 1. Notice of References Cited (PTO-892) 5. Notice of Informal Patent Application 2. Notice of Draftperson's Patent Drawing Review (PTO-948) Interview Summary (PTO-413). Paper No./Mail Date Information Disclosure Statements (PTO/SB/08). 7. X Examiner's Amendment/Comment Paper No./Mail Date 20101221 8. X Examiner's Statement of Reasons for Allowance 4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material 9. ☐ Other

 An Applicant's Request for Continued Examination (RCE) filed on December 21, 2010 has been entered. Overall, claims 49-75 are pending in this application.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

Re claim 51, applicant's claimed process for operating a compression ignition engine having an exhaust system comprising a non-filtered substrate monolith, wherein the substrate monolith comprises an arrangement of the Pd catalyst and Pt catalyst components selected from the group consisting of:(a) a first layer comprising the Pt catalyst and a second layer overlying the first layer, which second layer comprising the supported Pd catalyst and at least one base metal promoter; and (b) a Pt catalyst located downstream of the supported Pd catalyst and at least one base metal promoter; is not disclosed or rendered obvious by the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Prior Art

 The IDS (PTO-1449) filed on December 21, 2010 has been considered. An initialized copy is attached hereto. Art Unit: 3748

Communication

 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571) 272-4862.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tu M. Nguyen/

TMN Tu M. Nguyen

March 27, 2011 Primary Examiner

Art Unit 3748